

ABSTRACT OF THE DISCLOSURE

Integrated spectroscopy systems are disclosed. In some examples, integrated tunable detectors, using one or multiple Fabry-Perot tunable filters, are provided. Other examples use integrated tunable sources. The tunable source combines one or multiple diodes, such as
5 superluminescent light emitting diodes (SLED), and a Fabry Perot tunable filter or etalon. The advantages associated with the use of the tunable etalon are that it can be small, relatively low power consumption device. For example, newer microelectrical mechanical system (MEMS) implementations of these devices make them the size of a chip. This increases their robustness and also their performance. In some examples, an isolator, amplifier, and/or reference system
10 is further provided integrated.